Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A Fibre Channel device for use in a Fibre Channel fabric, the fabric coupling a plurality of external data devices, the fabric configured into at least two zones, where ~~the~~ external data devices are allowed to exchange data packets only with external data devices in the same zone, the Fibre Channel device enforcing the at least two zones in hardware, the Fibre Channel device comprising:

a receiving port for coupling to the fabric and receiving data packets;

a first transmitting port for coupling to the fabric and transmitting data packets;

a second transmitting port for coupling to an external data packet processing device; and

device logic connecting said receiving port and said first and second transmitting ports, wherein said device logic includes:

zoning data storage for storing configuration data indicative of the zone configuration of the fabric;

a comparison circuit connected to said zoning data storage for comparing at least a portion of the initial fields of a received data packet with said stored configuration data and providing an output; and

an action circuit connected to said comparison circuit and utilizing said comparison circuit output to determine an action to be performed on the received data packet,

wherein the action determined by said action circuit is to provide a data packet to said second transmitting port for transmission of the received data packet to the external data packet processing device.

2. (Currently Amended) The Fibre Channel device of claim 1, wherein an additional action determined by said action circuit is to forward ~~the~~ a data packet, and wherein said first transmitting port transmits the received data packet.

3. (Currently Amended) The Fibre Channel device of claim 1, wherein an additional action determined by said action circuit is to discard ~~the~~ a data packet, and wherein said first transmitting port does not transmit the received data packet.

4. (Original) The Fibre Channel device of claim 1, wherein said device logic further includes:

a memory for storing data packets;

receiver logic connected to said receiving port and said memory for receiving a data packet from said receiving port and storing the data packet in said memory; and

transmitter logic connected to said first and second transmitting ports and said memory for retrieving the data packet from said memory and providing the data packet to said first or second transmitting port.

5. (Currently Amended) The Fibre Channel device of claim 1, wherein the plurality of external data devices are fabric-attached, loop-attached or a combination of fabric-attached and loop-attached.

6. (Currently Amended) The Fibre Channel device of claim 1, wherein the plurality of external data devices are fabric-attached.

7. (Currently Amended) The Fibre Channel device of claim 1, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one of ~~the~~ a source address, a value relating to ~~the~~ a destination address, ~~the~~ a Fibre Channel type and ~~the~~ a logical unit number (LUN) value.

8. (Original) The Fibre Channel device of claim 7, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

9. (Original) The Fibre Channel device of claim 8, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

10. (Original) The Fibre Channel device of claim 9, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

11. (Currently Amended) The Fibre Channel device of claim 1, wherein said first and second transmitting ports have port numbers, wherein said action circuit uses a port number value to provide the received data packet to said second transmitting port, and wherein said port number value used by said action circuit is programmable.

12. (Currently Amended) A Fibre Channel switch for use in a Fibre Channel fabric, the fabric coupling a plurality of external data devices, the fabric configured into at least two zones, where the external devices are allowed to exchange data packets only with external data devices in the same zone, the Fibre Channel switch enforcing the at least two zones in hardware, the Fibre Channel switch comprising:

a microprocessor;

local memory connected to said microprocessor; and

a Fibre Channel device connected to and controlled by said microprocessor, wherein said Fibre Channel device includes:

a receiving port for coupling to the fabric and receiving data packets;

a first transmitting port for coupling to the fabric and transmitting data packets;

a second transmitting port for coupling to an external data packet processing device; and

device logic connecting said receiving port and said first and second transmitting ports, wherein said device logic includes:

zoning data storage for storing configuration data indicative of the zone configuration of the fabric;

a comparison circuit connected to said zoning data storage for comparing at least a portion of the initial fields of a received data packet with said stored configuration data and providing an output; and

an action circuit connected to said comparison circuit and utilizing said comparison circuit output to determine an action to be performed on the received data packet,

wherein the action determined by said action circuit is to provide a data packet to said second transmitting port for transmission of the received data packet to the external data packet processing device.

13. (Currently Amended) The Fibre Channel switch of claim 12, wherein an additional action determined by said action circuit is to forward ~~the~~ a data packet, and wherein said first transmitting port transmits the received data packet.

14. (Currently Amended) The Fibre Channel switch of claim 12, wherein an additional action determined by said action circuit is to discard ~~the~~ a data packet, and wherein said first transmitting port does not transmit the received data packet.

15. (Original) The Fibre Channel switch of claim 12, wherein said device logic further includes:

a memory for storing data packets;

receiver logic connected to said receiving port and said memory for receiving a data packet from said receiving port and storing the data packet in said memory; and

transmitter logic connected to said first and second transmitting ports and said memory for retrieving the data packet from said memory and providing the data packet to said first or second transmitting port.

16. (Currently Amended) The Fibre Channel switch of claim 12, wherein the plurality of external data devices are fabric-attached, loop-attached or a combination of fabric-attached and loop-attached.

17. (Currently Amended) The Fibre Channel switch of claim 12, wherein the plurality of external data devices are fabric-attached.

18. (Currently Amended) The Fibre Channel switch of claim 12, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one of ~~the~~ a source address, a value relating to ~~the~~ a destination address, ~~the~~ a Fibre Channel type and ~~the~~ a logical unit number (LUN) value.

19. (Original) The Fibre Channel switch of claim 18, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

20. (Original) The Fibre Channel switch of claim 19, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

21. (Original) The Fibre Channel switch of claim 20, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one

more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

22. (Currently Amended) The Fibre Channel switch of claim 12, wherein said first and second transmitting ports have port numbers, wherein said action circuit uses a port number value to provide the received data packet to said second transmitting port, and wherein said port number value used by said action circuit is programmable.

23. (Currently Amended) A Fibre Channel fabric comprising:

a plurality of external data devices;

a first Fibre Channel switch coupled to a first portion of said plurality of external data devices; and

a second Fibre Channel switch coupled to a second portion of said plurality of data external devices and coupled to said first Fibre Channel switch,

wherein the fabric is configured into at least two zones, where ~~said~~ external data devices are allowed to exchange data packets only with external data devices in the same zone and wherein said first and second Fibre Channel switches enforce the at least two zones in hardware, each of said first and second Fibre Channel switches including:

a microprocessor;

local memory connected to said microprocessor; and

a Fibre Channel device connected to and controlled by said microprocessor, wherein said Fibre Channel device includes:

a receiving port for coupling to the fabric and receiving data packets;

a first transmitting port for coupling to the fabric and transmitting data packets;

a second transmitting port for coupling to an external data packet processing device; and

device logic connecting said receiving port and said first and second transmitting ports, wherein said device logic includes:

zoning data storage for storing configuration data indicative of the zone configuration of the fabric;

a comparison circuit connected to said zoning data storage for comparing at least a portion of the initial fields of a received data packet with said stored configuration data and providing an output; and

an action circuit connected to said comparison circuit and utilizing said comparison circuit output to determine an action to be performed on the received data packet,

wherein the action determined by said action circuit is to provide a data packet to said second transmitting port for transmission of the received data packet to the external data packet processing device.

24. (Currently Amended) The Fibre Channel fabric of claim 23, wherein an additional action determined by said action circuit is to forward ~~the~~ a data packet, and wherein said first transmitting port transmits the received data packet.

25. (Currently Amended) The Fibre Channel fabric of claim 23, wherein an additional action determined by said action circuit is to discard ~~the~~ a data packet, and wherein said first transmitting port does not transmit the received data packet.

26. (Original) The Fibre Channel fabric of claim 23, wherein said device logic further includes:

a memory for storing data packets;

receiver logic connected to said receiving port and said memory for receiving a data packet from said receiving port and storing the data packet in said memory; and

transmitter logic connected to said first and second transmitting ports and said memory for retrieving the data packet from said memory and providing the data packet to said first or second transmitting port.

27. (Currently Amended) The Fibre Channel fabric of claim 23, wherein said plurality of external data devices are fabric-attached, loop-attached or a combination of fabric-attached and loop-attached.

28. (Currently Amended) The Fibre Channel fabric of claim 23, wherein said plurality of external data devices are fabric-attached.

29. (Currently Amended) The Fibre Channel fabric of claim 23, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one of ~~the~~ a source address, a value relating to ~~the~~ a destination address, ~~the~~ a Fibre Channel type and ~~the~~ a logical unit number (LUN) value.

30. (Original) The Fibre Channel device of claim 29, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

31. (Original) The Fibre Channel device of claim 30, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

32. (Original) The Fibre Channel device of claim 31, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

33. (Currently Amended) The Fibre Channel device of claim 23, wherein said first and second transmitting ports have port numbers, wherein said action circuit uses a port

number value to provide the received data packet to said second transmitting port, and wherein said port number value used by said action circuit is programmable.

34. (Currently Amended) A Fibre Channel device for use in a Fibre Channel fabric, the fabric coupling a plurality of external data devices, the fabric configured into at least two zones, where ~~the~~ external data devices are allowed to exchange data packets only with external data devices in the same zone, the Fibre Channel device enforcing the at least two zones in hardware, the Fibre Channel device comprising:

a receiving port for coupling to the fabric and receiving data packets;

a first transmitting port for coupling to the fabric and transmitting data packets;

a second transmitting port for coupling to an external data packet processing device; and

device logic connecting said receiving port and said first and second transmitting ports, wherein said device logic includes:

zoning data storage for storing configuration data indicative of the zone configuration of the fabric;

a comparison circuit connected to said zoning data storage for comparing at least a portion of the initial fields of a received data packet with said stored configuration data and providing an output; and

an action circuit connected to said comparison circuit and utilizing said comparison circuit output to determine an action to be performed on the received data packet,

wherein the action determined by said action circuit is to provide a data packet to said second transmitting port for transmission of the received data packet to the external data packet processing device, and

wherein said zoning data storage includes:

a data packet register for storing portions of a data packet;

a first memory storing filtering information relating to a first portion of a data packet;

a first comparator coupled to said first memory and said data packet register comparing said information to the data packet and providing an output indicative thereof;

a second memory storing filtering information relating to a second portion of the data packet;

a second comparator coupled to said second memory and said data packet register comparing said information to the data packet and providing an output indicative thereof;

a third memory coupled to said first comparator indicating group information based on said first comparator output; and

a fourth memory coupled to said second comparator indicating group information based on said second comparator output.

35. (Original) The Fibre Channel device of claim 34, wherein said first memory and said first comparator form a content addressable memory; and

said second memory and said second comparator form a content addressable memory.

36. (Currently Amended) The Fibre Channel device of claim 34, wherein an additional action determined by said action circuit is to forward ~~the~~ a data packet, and wherein said first transmitting port transmits the received data packet.

37. (Currently Amended) The Fibre Channel device of claim 34, wherein an additional action determined by said action circuit is to discard ~~the~~ a data packet, and wherein said first transmitting port does not transmit the received data packet.

38. (Original) The Fibre Channel device of claim 34, wherein said device logic further includes:

a memory for storing data packets;

receiver logic connected to said receiving port and said memory for receiving a data packet from said receiving port and storing the data packet in said memory; and

transmitter logic connected to said first and second transmitting ports and said memory for retrieving the data packet from said memory and providing the data packet to said first or second transmitting port.

39. (Currently Amended) The Fibre Channel device of claim 34, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one of ~~the~~ a source address, a value relating to ~~the~~ a destination address, ~~the~~ a Fibre Channel type and ~~the~~ a logical unit number (LUN) value.

40. (Original) The Fibre Channel device of claim 39, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

41. (Original) The Fibre Channel device of claim 40, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

42. (Original) The Fibre Channel device of claim 41, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

43. (Currently Amended) The Fibre Channel device of claim 34, wherein said first and second transmitting ports have port numbers, wherein said action circuit uses a port number value to provide the received data packet to said second transmitting port, and wherein said port number value used by said action circuit is programmable.

44. (Currently Amended) A Fibre Channel switch for use in a Fibre Channel fabric, the fabric coupling a plurality of external data devices, the fabric configured into at least two zones, where ~~the~~ external devices are allowed to exchange data packets only with external data devices in the same zone, the Fibre Channel switch enforcing the at least two zones in hardware, the Fibre Channel switch comprising:

a microprocessor;

local memory connected to said microprocessor; and

a Fibre Channel device connected to and controlled by said microprocessor, wherein said Fibre Channel device includes:

a receiving port for coupling to the fabric and receiving data packets;

a first transmitting port for coupling to the fabric and transmitting data packets;

a second transmitting port for coupling to an external data packet processing device; and

device logic connecting said receiving port and said first and second transmitting ports, wherein said device logic includes:

zoning data storage for storing configuration data indicative of the zone configuration of the fabric;

a comparison circuit connected to said zoning data storage for comparing at least a portion of the initial fields of a received data packet with said stored configuration data and providing an output; and

an action circuit connected to said comparison circuit and utilizing said comparison circuit output to determine an action to be performed on the received data packet,

wherein the action determined by said action circuit is to provide a data packet to said second transmitting port for transmission of the received data packet to the external data packet processing device, and

wherein said zoning data storage includes:

a data packet register for storing portions of a data packet;

a first memory storing filtering information relating to a first portion of a data packet;

a first comparator coupled to said first memory and said data packet register comparing said information to the data packet and providing an output indicative thereof;

a second memory storing filtering information relating to a second portion of the data packet;

a second comparator coupled to said second memory and said data packet register comparing said information to the data packet and providing an output indicative thereof;

a third memory coupled to said first comparator indicating group information based on said first comparator output; and

a fourth memory coupled to said second comparator indicating group information based on said second comparator output.

45. (Original) The Fibre Channel device of claim 44, wherein said first memory and said first comparator form a content addressable memory; and

said second memory and said second comparator form a content addressable memory.

46. (Currently Amended) The Fibre Channel switch of claim 44, wherein an additional action determined by said action circuit is to forward ~~the~~a data packet, and wherein said first transmitting port transmits the received data packet.

47. (Currently Amended) The Fibre Channel switch of claim 44, wherein an additional action determined by said action circuit is to discard ~~the~~ a data packet, and wherein said first transmitting port does not transmit the received data packet.

48. (Original) The Fibre Channel switch of claim 442, wherein said device logic further includes:

a memory for storing data packets;

receiver logic connected to said receiving port and said memory for receiving a data packet from said receiving port and storing the data packet in said memory; and

transmitter logic connected to said first and second transmitting ports and said memory for retrieving the data packet from said memory and providing the data packet to said first or second transmitting port.

49. (Currently Amended) The Fibre Channel switch of claim 44, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one of ~~the~~ a source address, a value relating to ~~the~~ a destination address, ~~the~~ a Fibre Channel type and ~~the~~ a logical unit number (LUN) value.

50. (Original) The Fibre Channel switch of claim 49, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

51. (Original) The Fibre Channel switch of claim 50, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

52. (Original) The Fibre Channel switch of claim 51, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

53. (Currently Amended) The Fibre Channel switch of claim 44, wherein said first and second transmitting ports have port numbers, wherein said action circuit uses a port

number value to provide the received data packet to said second transmitting port, and wherein said port number value used by said action circuit is programmable.

54. (Currently Amended) A Fibre Channel fabric comprising:

a plurality of external data devices;

a first Fibre Channel switch coupled to a first portion of said plurality of external data devices; and

a second Fibre Channel switch coupled to a second portion of said plurality of data external devices and coupled to said first Fibre Channel switch,

wherein the fabric is configured into at least two zones, where ~~said~~ external data devices are allowed to exchange data packets only with external data devices in the same zone and wherein said first and second Fibre Channel switches enforce the at least two zones in hardware, each of said first and second Fibre Channel switches including:

a microprocessor;

local memory connected to said microprocessor; and

a Fibre Channel device connected to and controlled by said microprocessor, wherein said Fibre Channel device includes:

a receiving port for coupling to the fabric and receiving data packets;

a first transmitting port for coupling to the fabric and transmitting data packets;

a second transmitting port for coupling to an external data packet processing device; and

device logic connecting said receiving port and said first and second transmitting ports, wherein said device logic includes:

zoning data storage for storing configuration data indicative of the zone configuration of the fabric;

a comparison circuit connected to said zoning data storage for comparing at least a portion of the initial fields of a received data packet with said stored configuration data and providing an output; and

an action circuit connected to said comparison circuit and utilizing said comparison circuit output to determine an action to be performed on the received data packet,

wherein the action determined by said action circuit is to provide a data packet to said second transmitting port for transmission of the received data packet to the external data packet processing device, and

wherein said zoning data storage includes:

a data packet register for storing portions of a data packet;

a first memory storing filtering information relating to a first portion of a data packet;

a first comparator coupled to said first memory and said data packet register comparing said information to the data packet and providing an output indicative thereof;

a second memory storing filtering information relating to a second portion of the data packet;

a second comparator coupled to said second memory and said data packet register comparing said information to the data packet and providing an output indicative thereof;

a third memory coupled to said first comparator indicating group information based on said first comparator output; and

a fourth memory coupled to said second comparator indicating group information based on said second comparator output.

55. (Original) The Fibre Channel device of claim 54, wherein said first memory and said first comparator form a content addressable memory; and

said second memory and said second comparator form a content addressable memory.

56. (Currently Amended) The Fibre Channel fabric of claim 54, wherein an additional action determined by said action circuit is to forward ~~the~~ a data packet, and wherein said first transmitting port transmits the received data packet.

57. (Currently Amended) The Fibre Channel fabric of claim 54, wherein an additional action determined by said action circuit is to discard ~~the~~ a data packet, and wherein said first transmitting port does not transmit the received data packet.

58. (Original) The Fibre Channel fabric of claim 54, wherein said device logic further includes:

a memory for storing data packets;

receiver logic connected to said receiving port and said memory for receiving a data packet from said receiving port and storing the data packet in said memory; and

transmitter logic connected to said first and second transmitting ports and said memory for retrieving the data packet from said memory and providing the data packet to said first or second transmitting port.

59. (Currently Amended) The Fibre Channel fabric of claim 54, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one of ~~the~~ a source address, a value relating to ~~the~~ a destination address, ~~the~~ a Fibre Channel type and ~~the~~ a logical unit number (LUN) value.

60. (Original) The Fibre Channel device of claim 59, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

61. (Original) The Fibre Channel device of claim 60, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one

more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

62. (Original) The Fibre Channel device of claim 61, wherein said at least a portion of the initial fields compared by said comparison circuit include the portion for at least one more of the source address, a value relating to the destination address, the Fibre Channel type and the logical unit number (LUN) value.

63. (Currently Amended) The Fibre Channel device of claim 54, wherein said first and second transmitting ports have port numbers, wherein said action circuit uses a port number value to provide the received data packet to said second transmitting port, and wherein said port number value used by said action circuit is programmable.